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AUTHOR	Kalba, Kas
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ABSTRACT

A review of experimental activities in educational broadcasting shows that mass television and instructional television, as we think of them today, are likely to constitute two points on a greatly expanded spectrum of television concepts in the future. Television will become much more like the publishing industry, with its mix of pamphlets, art books, manuals, best sellers, and Whole Earth Catalogs. Educators will have to find ways of incorporating some of these experimental approaches into the production process. In some cases, it will mean getting video freaks and artists to work jointly with the more traditional instructional television producers. However, key questions must be answered about how media facilities at our institutions of higher learning should operate in the future and what they should look like. For example, should these facilities be primarily oriented to serving the needs of large-scale university publishing projects that are intended to produce very high quality programing for a broader market? Or should they serve the needs of the faculty member or student who wants to utilize a half-inch video recorder as part of a specific learning experience? (WCM)

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Experimental Trends in Videoprogramming

by Kas Kalba

EXPERIMENTAL TRENDS IN VIDEOPROGRAMMING

The task I have set for myself in this presentation is to provide an overview of ongoing experimental activities that may have an impact on tomorrow's educational programming, particularly with respect to higher learning. I have to admit, however, that this poses somewhat of a problem, given the limited space in this paper. Not quite as much of a problem as trying to present a capsulated version of world literature, but a problem nonetheless, for there is a considerable amount of activity going on in what I have described elsewhere as "the video implosion."[1] While video experimentation has not exploded as yet, in that most people, educators included, have only started to become aware of this area, the variety and intensity of innovation that has been launched during the past five years is nonetheless astounding. To introduce you to some of this activity, I will review briefly six or seven areas of experimentation as well as try to suggest some of the implications that can be made concerning the production of educational programming in the future.

But before I proceed with the review of the separate areas, let me indicate why current video experiments should be closely followed and why they are likely to remain important for some time to come. On the one hand, it is fair to say that we have had great promises about new

experimental technology and new experimental programming in the past. In examining video developments this past year, I have come across a volume on a conference about super-8 film that was held about 10 years ago in which great expectations about a communications revolution are also raised. Similarly, in experimental and independent filmmaking, some of the same paths that are currently being pursued in video have already been tried. And the results have not always been as encouraging as the proponents of experimentation would have us believe. In short, I am not guaranteeing that video is something unique or that it will develop in a way that previous experimental efforts have not. On the other hand, I should like to suggest some reasons why the impract of this latest round of experimentation may be more significant.

First, there is novelty involved and it is occurring on an unprecedented scale. We are currently witnessing the emergence of a host of new video technologies, including the portapak, video cassettes, and two-way video systems. These new technologies have generated considerable excitement on the part of entrepreneurs, artists, and "video freaks". Yet, like all novelty, the utilization of the new technology will be subject to fluctuations in aesthetic taste, market factors, and even politics; the novelty may wear off. What, perhaps, is more important is that video is more closely related to the television medium, and the existing pervasiveness of television suggests that perhaps some of these current experimental developments are likely to be implemented on a broader scale. I should add that in referring to the pervasiveness of television, I mean two things. One of these is the acceptability of television in our culture, especially the role that it has played for the young who now perceive the world in television terms as much as they do in book terms. Secondly, I am thinking of the practical availability of TV receivers. There are more TV receivers in homes, schools, and elsewhere than there are film projectors.

Obviously, the new distribution systems that are being discussed at this conference will also increase the potential importance of current video experimentation because they provide new outlets such as cable television, video cassettes, and multipoint distribution systems. And with these new distribution systems, new concepts of utilizing television are likely to emerge and gradually gain acceptance among the public and the educational community. In general terms, I see television moving toward what I have called "service video", which is to say that it will begin to meet our everyday informational and cultural needs in addition to serving as a purveyor of mass entertainment and dramatic newscasts.[2] I think all the new distribution systems will help orient television toward this new programming concept.

Finally, probably the most important factor that should be listed is the cost-reducing quality of some of the recent experimentation. I am

referring here to program production costs, which in some instances have been reduced to $100 or $200. This is certainly a different scale of production cost than even instructional television and certainly commercial broadcasting have been used to. To be sure, a trade-off is often involved due to the lower technical quality of half-inch equipment, but this is being worked on. The advent of programming and technical breakthroughs can no longer be denied.

SOME SPECIFIC AREAS OF EXPERIMENTATION

So, with these opening comments, let me now focus on some specific areas of experimentation, which in the aggregate will, I believe, underscore the general points I have raised. First, the two-way video classroom. Mike Molenda in his paper, indicated that some of the major studies in this area have shown that two-way television used for instruction is not as effective in general as one-way televised instruction or as face-to-face lecturing. On first impression, this appears to be a startling finding. Most of the studies that Molenda referred to were based on systems utilizing one-way television plus an audio feedback channel. But it is also worth mentioning that additional studies say the same results occur when you use full two-way video, where both sides have audio-video capability at their disposal. One such study, conducted at Penn State by George Larimer and W. Ward Sinclair,[3] reports that students at the remote end of the system held a negative view toward the format of the course and received lower test scores upon its completion.

Keeping these initial study results in mind, I think it's also important to point out that in some cases, two-way television in the educational context, as well as in other contexts, has been used successfully. I believe the TAGER network, in this area, northern Texas, is one such example. I understand that Colorado State has also utilized this kind of system and has been happy with the outcome. In other areas of development, most notably in medicine, where several forms of telemedicine have been tested involving two-way communication between both doctor and patient and doctor and doctor, the system has worked out quite well, and similar video conferencing systems have been employed in the business sector as well as by government. For example, there is a demonstration system now in use in the metropolitan New York area that interconnects 10 county governments by two-way video for administrative and training purposes. I have recently been told by Rodman Davis of the Metropolitan Regional Commission that the system is quite effective.

Returning to the educational context, one of the key factors that may affect the success of two-way video interconnection is whether there is a live as well as a remote classroom. With a live classroom the experience is like to be more favorable and its students will learn more than those in the

remote counterpart. By equalizing the situation, however, and having only remote classrooms connected to a lecturing studio, the overall effectiveness of the two-way system is likely to increase. What you have done, in effect, is to structure a different kind of communications environment. The instructor must now start to orient his presentation towards remote students rather than pursue a conventional live classroom approach.

In addition, there are numerous technical issues which we are only beginning to understand, that have to be dealt with in the organizing of a two-way video communication system. Who should control the camera on the speaker, for example? Should it be the speaker, the receiver, or a third party? Should you see yourself on a monitor while you see the other person, or shouldn't you? Do you pretend that it's a face-to-face situation, in which you shouldn't see yourself? Or do you assume that video space is a very different kind of space and that, consequently, you should be aware of the fact you're coming across as an image and not as a three-dimensional person in a direct face-to-face contact? Theoretical and practical debates are going on concerning such issues.

Another area of experimentation is that of videopublishing. Basically, this area has developed around the emergence of the videocassette and the program production industry that this has generated. One contribution that videopublishing can make to our concerns is its development of new notions about how videoprogramming can be utilized. Videopublishers have produced complete self-instruction kits, an example of which we saw in Dave Wight's paper. Another example is Time/Life's production of a speed reading course with Dick Cavett as the narrator. In fact, the entire training area is expanding the utilization of videocassettes. You can now buy cassettes on how to improve your golf swing, how to invest in stocks, how to be a better manager (or employee), and how to sell automobiles.

In other instances, videopublishers are beginning to use videocassettes as reference materials. A cassette on baby care produced by Caravatt-Kleiman in New York actually contains about 50 separate segments. Some of them deal with general behavioral characteristics, others with the routine handling of babies, and a final section focuses on emergency situations. The information is very densely packed and you can refer to only that segment or segments which relate to your immediate concern. Moreover, you have the visual dimension which is an important asset particularly in an emergency situation when you are trying to decide rapidly whether your baby is experiencing, say, a severe convulsion. A printed medical guide cannot adequately illustrate what a severe convulsion entails. Obviously, this notion of video reference books has many points of transfer to higher education. The industry's experimentation with a variety of programming formats is another development in videopublishing that is worth following. The majority of

the productions fall into a few conventional programming categories, with a count of talking heads second only to instructional television. But new formats are also being conceived and tested: dramatizations, panel discussions, animation, and so on. And since the costs involved in these productions are substantially lower than those of commercial television, their potential transfer to education becomes especially significant.

LOCAL CABLECASTING

It is worth pointing out that some regulatory uncertainty continues to affect local cablecasting. A couple of years ago, the FCC ruled that all cable television systems with over 3,500 subscribers would have to engage in local orientation. But that ruling has been challenged in the courts, and the FCC has not enforced it. I know that the Cable Television Information Center sent a letter to the FCC to clarify this situation, which has remained unanswered for a year.

Nonetheless, there are hundreds of cable systems that are providing local programming. In some cases, this type of programming takes on a very specific focus. For example, in New York City there was recently an "A for Art" series devoted to programming on local art. In Montreal, they have periodic news programs aimed at various ethnic minorities, Montreal being a diverse ethnic community. In Memphis, Tennessee, where a cable system is now being installed, there is a coalition of women's groups that is organizing an entire channel of cable television on a regular basis for women's programming. These are instances of highly focussed local programming. Usually, though, you're likely to get more of a mix, some talk and variety shows, coverage of town council meetings and other local political and social events, local sports programs, children's programming, and so forth.

Specifically, in relation to education, the most common type of program is a periodic newscast or talk show that lets the community know more about what's going on at the local school, high school, or even university in some cases. Such a program may announce school-related events, indicate educational programs that are being developed, as well as carry interviews with local school personnel. In other cases, retransmissions of closed-circuit broadcasts are provided for home-based students. There are also some examples of programming produced by primary or high school students such as "Kideo Video" in Amherst, Massachusetts. And, as you probably have already found out at this conference, there are a few colleges such as Oregon State and the City University of New York that transmit TV courseware on the cable system for credit.

The novelty involved in local programming is not so much new formats or new content. Talk shows, sports, and educational courses can

be seen on commercial and/or public television. Cable allows television with a very local character to emerge. This can be contrasted with conventional local broadcasting, which typically has a metropolitan orientation. Moreover, cable provides much more channel capacity for local programming, including a separate channel that has been allocated by the FCC for education uses.

The area of alternate video and public access involves substantial innovation in both content and format. Public access, as you may know, is now also mandated by the Federal Communications Commission with respect to new cable systems. The idea is that anyone can have access to a channel on the cable system on a first-come, first-served basis. Along with the advent of the portapak, this regulatory decision has spurred a variety of community groups to produce half-inch videoprogramming. In some cases, this programming reflects the values of the counterculture or a minority group; in other cases, it reflects simply the informational needs of a particular neighborhood or community organization.

A video group that exemplifies this new development is the Downtown Community TV Center, which operates in Manhattan's Chinatown. The subjects of the tapes produced at the Center vary from health advocacy and English as a second language to acupuncture and Chinese opera. Only about a third of the tapes the Center produces are in English, the remainder being in Chinese and Spanish (there is also a considerable Puerto Rican population in the neighborhood). The tapes are shown on portable monitors at community meeting places as well as on Manhattan's cable television system. And similar video groups are now operating in Minneapolis, San Francisco, Washington, D.C., Orlando, and elsewhere.

OTHER USES OF VIDEO

Let me now briefly try to cover a couple of final areas. One has to do with the utilization of video in teaching, research, and professional practice. As some of you may know, there are very specialized uses of video. Here agin, the availability of inexpensive half-inch technology has led to a proliferation of video uses in medicine and psychiatry, in the arts (where it's used, for example, by dancers for rehearsal purposes), in real estate, and so on. In our courts today, judges are beginning to experiment with videorecording to edit out prejudicial material that enter into the taking of testimony from witnesses. Only the edited tape is presented to the jury. At the same time, the judge has to keep the master tape in case there is even an appeal of his or her decision based on how the master tape had been edited.

In the educational realm, video is being used for microteaching as a means of better evaluating a teacher's performance. The portapak is a

ready-made tool for seeing how you teach and how you orient towards students. Videotaping is also being used for educational exchange purposes. For instance, one of the courses I teach is on communications planning. When I want to do a session on interactive television, I have a video tape on PLATO that cost me $12 which I show rather than trying to explain the system on the blackboard. The tape does not involve elaborate production but it more than serves its purpose.

Video is also beginning to be used by students instead of term papers for preparing reports. Again, at the Harvard Graduate School of Design, three students recently produced a videotape on transportation problems of the elderly. It was their first production effort. Rather than being filed like a term paper would be, the tape has been shown to several community groups, and the Massachusetts State Department of Transportation has asked the three students to develop a follow-up tape for agency and community education purposes.

A parallel use of video is to record oral history. For example, students of urban history do video projects on individuals with long experience in a particular neighborhood who talk about the evolution of that neighborhood in terms of social and other kinds of change. It represents a valuable means of recording information for use in high school or college teaching programs.

Finally, what about video art? It is not unreasonable to ask what experimental artists have to do with education. I, for one, believe that the answer should be quite a bit. Take computer-assisted instruction: In the past—and fortunately, the PLATO system is beginning to disprove me on this point—CAI programs have been developed primarily by engineers, psychologists, and mathematicians. As a result the cathode ray tube has been seen as simply a series of lines for the display of alphanumeric information. While this has led to the development of logistically sound interactive programs, it has not always resulted in the most creative use of the medium. In short, I would argue that artists who might see the cathode ray tube as a canvas for visual manipulation could greatly improve the appeal and impact of CAI. They could have a similar impact on instructional television.

Video art experimentation has taken several directions over the past few years, including those of representational and conceptual art. The most striking developments, however, have occurred with respect to abstract video experimentation, thanks largely to the advent of a new tool called the video synthesizer. This is a machine or set of machines that allow you to take video images generated by a camera and process them in several ways such as adding color or rendering them more abstract. Experimental techniques of this sort could play an important role in the enhancement of future instructional courseware. In addition, as Nan June Paik, a founder of video art, has suggested, they could be utilized directly

in the teaching of basic principles of physics or electronics.

IMPLICATIONS FOR EDUCATIONAL PROGRAMMING

Finally, let me summarize the implications of the various experimental efforts I have described for the development of educational programming. First of all, I think experimentation helps us become aware of a broader set of formats and methods for utilizing video and television. It increases our options for developing new programs. And it suggests that our concepts of television have been quite limited in the past. Mass television and instructional television, as we think of them today, are likely to constitute two points on a greatly expanded spectrum of television concepts in the future. Television will become much more like the publishing industry, with its mix of pamphlets, art books, manuals, best sellers, and Whole Earth Catalogs.

The second point that has to be made is that as educators we have to find ways of incorporating some of these experimental approaches into the production process. This will pose a considerable challenge but an essential one if we are to get away from the limited programming repertoire today. In some cases, it will mean getting video freaks and artists to work jointly with the more traditional instructional television producers. These two groups may have different goals and will certainly have different styles of approaching programming. The particulars of a cooperative approach will not be easy to organize, but the results could be very valuable.

And third, this review of experimental trends leads me to pose key questions about how media facilities at our institutions of higher learning should operate in the future and what they should look like. For example, should these facilities be primarily oriented to serving the needs of large-scale university publishing projects that are intended to produce very high quality programming for a broader market? Or should they serve the needs of the faculty member or student who wants to utilize a half-inch video recorder as part of a specific learning experience? These questions quickly lead to others having to do with budgetary decisions, the physical distribution of equipment, staffing needs, and many others. But they are questions well worth asking.

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